
Improvements to the D-104 Microphone

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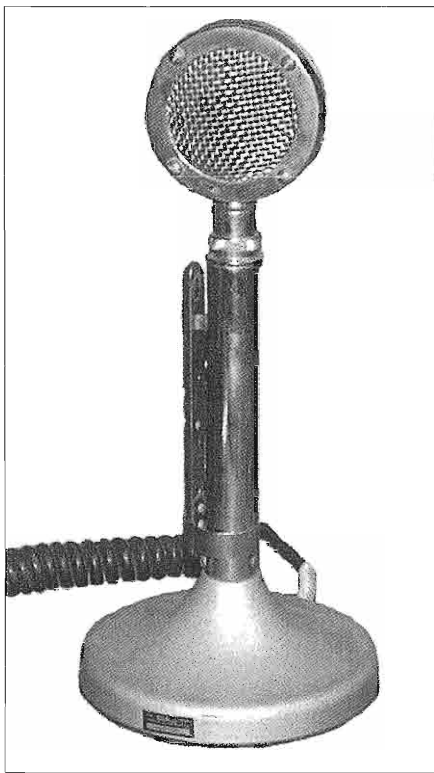
The G Stand Has Got to Go!

I've used and enjoyed the Astatic D-104 microphone for nearly 30 years now, and it always sounds great on my vintage gear. Lately, I've been thinking that the stock "G" stands on my D-104s are not the ideal physical design for the casual postures I tend to assume when running AM. Resting the microphone stand on my midsection as I leaned back was not only undignified, but led to a painful

condition of the abdomen I came to call "The G-Spot."

Thus stimulated, my mind began contemplating alternatives. I tried the Astatic mobile-style, hand-held crystal and ceramic mics, but they didn't quite fit the bill either. Studying the connector on the stalk of the D-104 head, I was struck by its similarity to the A3M/A3F series of audio connectors—also known as XLRs or Q-G connectors—so common in professional broadcast and music microphone applications. See **Figures 1 and 2**. I found the Astatic three-pin male connector on the D-104 has a different pin size and spacing, and would not mate a Switchcraft A3F directly, but I soon realized that the plastic connector insert diameters were nearly the same. If I replaced the D-104 connector's *guts* with the innards of an A3M, I could then plug in an A3F cord directly and discard the G-stand. See **Figure 3**.

Careful disassembly of the D-104 head (crystal elements can be fragile) via the four obvious ring screws showed me the wiring entering the connector. There was plenty of slack in the wires, so I closed the mic head back up and just removed the connector set screw and slid the plastic insert out. I unsoldered the wires and prepped them for attachment to a new A3M insert. It seemed possible that the new, slightly longer insert might bottom out and short the pins to the metal shell, so I trimmed their back ends about 2mm and soldered the wires in place. The particular connector insert I used was one from an XLR sold by Radio Shack¹, and by luck the set-screw holes lined right up. An insert from a Switchcraft A3M looked like it would require a new hole, but would probably work fine with a bit of extra work. I also cut and removed the screw-ring around the D-104 connector, as it would no longer be



The Astatic D-104 mic mounted on its traditional Model G desk stand.



Figure 1: the A3F connector.



Figure 2: A3M connector.

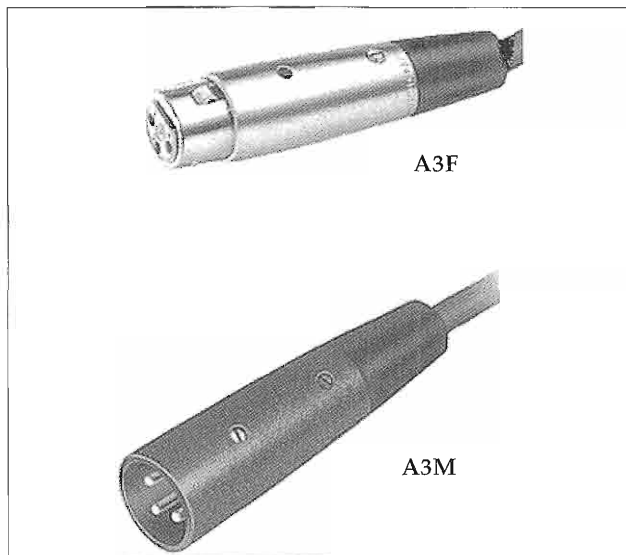


Figure 3, left:

Above, A3F connector that mates to the modified D-104 and also acts as a handle.

Below, the A3M connector. The insert will fit the D-104 head.

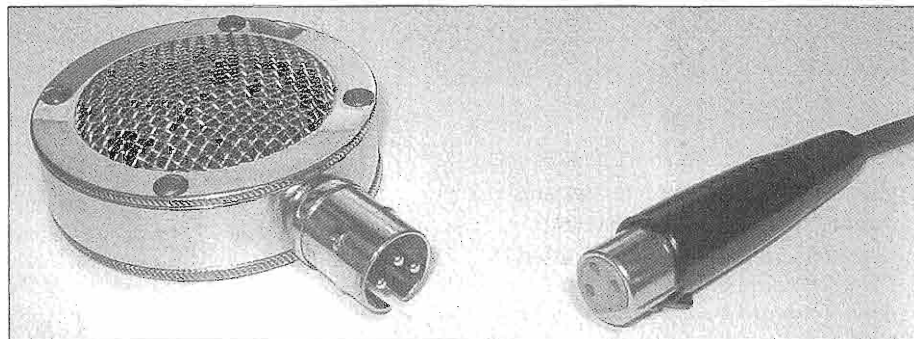


Figure 4: The modified D-104 microphone connector and its new connector.

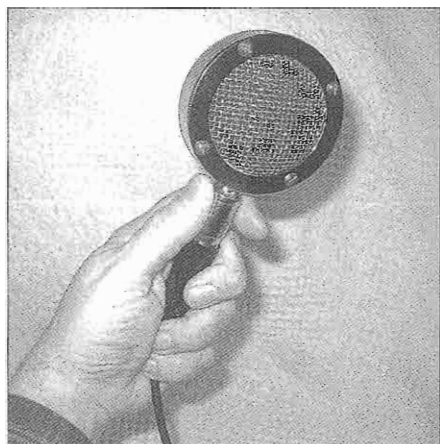


Figure 5: My hand-held D-104.



Figure 6: The modified D-104 angle-mounted to an Atlas desk stand.

needed. Figure 4 shows the modified D-104 and its connector.

The moment I held the *Hand-held D-104* I knew I would enjoy this new, old mic, show in Figure 5. But, a stand would be nice too. I pulled out an Atlas DS-7

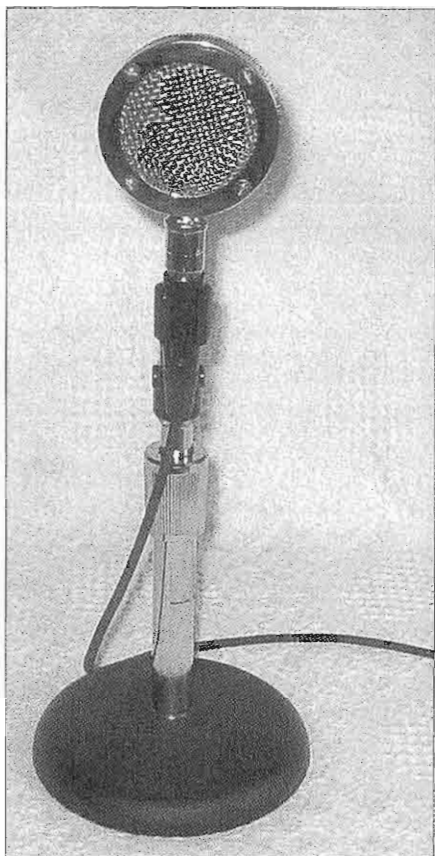


Figure 7: The D-104 in another configuration on the Atlas disk stand.

adjustable desk stand², screwed a standard plastic mic clamp on the top, and slid the D-104 into the clamp. Now, I had a mic that could adapt at a moment's notice from hand-held to desk mounted, 11 to 18 inches high. See Figures 6 and 7. In other installations, a flexible gooseneck or professional mic boom could be used; they are available with built-in XLR connectors too. A floor stand and mic clamp can be used as well for on-air lectures and extreme old-buzzard transmissions.

1. RadioShack XLR connectors: P/N 274-010 and 274-011.

2. Atlas mic stands: <http://www.atlas-soundolier.com/products/partNumber.cfm?pn=DS7> ER